UNIVERSITY OF MINNESOTA COMPUTER CENTER

Deadstart Systems Newsletter

27 January 1976 Vol. 2, No. 2

Send all comments, criticisms and contributions to the editor: T. W. Lanzatella
University Computer Center, 2520 Broadway Drive, Lauderdale, MN 55113

Because only one modification was submitted for inclusion on this week's tape, a new tape will not be installed this week.

## PROPOSED CHANGES TO THE OPERATING SYSTEM

N. L. Reddy submitted the following proposal to change the form of queue mnemonics used in DSD commands.

Each file type has a two character mnemonic which is recognized throughout the system. Console commands dealing with the file types use a one character mnemonic. Examples are:

PRINT file - PR and O
PUNCH file - PH and P
PLOT file - PL and V

I propose to extend the use of the two character mnemonics to include console commands too.

It will affect display commands like: H, I, and action commands like: PURGALL, O. The above two commands will become: H, IN and PURGALL, PR under the new scheme. The advantages to this new scheme are:

1. Processing and coding will become simpler in DSD.

2. Uniformity throughout the system.

3. The mnemonics become more meaningful to operators, i.e., PL for PLOT files is more meaningful than V.

The following proposal is due to Bill Elliott.

A C option should be added to both VERIFY and CATALOG to allow operations on even parity SI, S and L format tapes. Currently, these programs abort with parity errors when coded mode operations are attempted.

Rich Franta submitted the following new proposal for changes to the WRITEUP control card.

During the last Systems Group meeting, it was decided to implement the following change in the WRITEUP control card:

1. WRITEUP will be able to process two types of files. The first type (in use now) will be TEXT files of information consisting of one TEXT type record and an EOF/EOI. The second type of file (new addition) will consist of many named TEXT records along with an OPLD directory (at the end) followed by an EOF/EOI. Each record will be accessible by name through the WRITEUP command.

2. The WRITEUP control card will be of the following form:

   WRITEUP, S1, S2, S3, ... .
   where SI may be any of the forms.

   A. LFN - for a file of the first type (no OPLD) the first record of the file will be copied to the output file (this is present usage).

   B. LFN - for a file of the second form (OPLD present) the record named "INDEX" will be copied to the output file or if no "INDEX" record is available the first card image of each record will be written to the output file.

   C. LFN = N1/N2/.../NJ - if no OPLD is present the message:

      "LFN is not an indexed file"

      will be issued and processing will continue as in A above. If an OPLD is present only the records of name N1 through NJ will be copied to the output file. If NI is not present in the OPLD the message

      "NI not available"

      will be issued and processing will continue.

   D. LFN = * - all records listed in the OPLD will be copied to the output file. If no OPLD is present processing will continue as in A above after the message.

      "LFN is not an indexed file"

      is issued.

   E. LFN = N1 - NN - all named records from N1 to NN (inclusive) in the OPLD will be copied to the output file. If no OPLD is present processing will continue as in D above.

   F. L = LFN - WRITEUP goes to LFN instead of OUTPUT (no EOF is written on OUTPUT).

All staff members creating WRITEUP files containing OPLD records should follow these rules.

1. The first record on the file should contain a description of each of the other records including the name, revision date, content and method of access as outlined in C, D, and E above.

2. The name of such a record as given in 1 above should be "INDEX."

3. No WRITEUP files should be on tape until further modifications are made to WRITEUP and tape usage formats are formalized.

All WRITEUP files should be created as follows:

1. UN = YZE6000 (PW = UPWRITE)

2. PN = SP

3. CT = PUBLIC

4. M = READ

5. FC = SC

This change to WRITEUP would allow the creation of (for example) a file named UMST of the following structure.

| RECORD | NAME | CONTENT |
|---|---|---|
| 1 | INDEX | A short description (1 - 2 lines) of each available UMST program, its name and an example of how to use WRITEUP to get more information on each of them. |
| 2 - N | UMST500 (etc.) | A more lengthy description of what this UMST does, access method and available control card parameters. |
| N + 1 | OPLD | LIBEDIT OPLD index to previous N records. |

This would now allow the user to do a WRITEUP, UMST. or WRITEUP, UMST/INDEX. to get a brief description of all available UMST programs. With this information he could then do a WRITEUP, UMST/UMST500/UMST600. to get more details on these two programs. Although UMST is used here as an example there are many other places where such a file could be used.

This proposal was approved at the last Systems Meeting so this article will only serve to formalize the implementation and usage of the new option.

SYSTEM MAINTENANCE - PEOPLE AND PROCEDURES

Alan Johnston has produced a complete listing of the stock level 11 operating system on microfilm. The film spools are located in the PSR drawer in the file cabinet in Tom Lanzatella's office at Lauderdale.

Alan Johnston prepared the following report on the new 64 character set coming with KRONOS 2.1.2.

KRONOS 2.1.2 Timesharing Character Sets - by A. F. Johnston

CDC has introduced a new 63/64 character set in KRONOS 2.1.2. This new character set differs from the current KRONOS 2.0 character set for some of the display code characters above 60B ( see KRONOS 2.1 Vol. 1, revision D Reference Manual). As a result, the new character set is not compatible with the current character set. Because of this, we should keep the current character set as standard under KRONOS 2.1.2 until such time that the new 63/64 character set is more feasible to use.

In KRONOS 2.1.2 there exists character set translation tables for the new 63/64 character set and the old KRONOS 2.0 character set. The reason CDC left the old KRONOS 2.0 set was to allow compatibility for programs written under the old character set. CDC also included a new program called CONVERT, which converts programs to the new 63/64 set from the old 61 character set (KRONOS 2.0). To select the new or the old character sets, the TERM command can be used to switch from one character translation table to another. Therefore if the user wishes to use the 63/64 character set, a TERM,TTY can be entered. To use the old 61 character set TERM,TTYD can be used. Also default terminal type (character set) can be set in the validation file through MODVAL so that users are in TTYD after they log in. This scheme provides an easy way to default the old character set. A small modification should be made to 1TD so that TTYD is PP resident to decrease service time to terminals using the old character set.

One of the main reasons for staying with the old character set is that MERITSS is currently using the 61 character set, and to remain compatible with user programs, the character sets should be compatible. Programs written on MERITSS that depend on character input, like XEDIT, would not work properly with the 63/64 character set. The same problem occurs with non-CDC compilers like SNOBOL. The compilers can not process source input programs written in the 63/64 character set properly and would require modifications to do so.

In converting to KRONOS 2.1.2, the old KRONOS 2.0 character set should be the default standard at least until this summer or until MERITSS goes to KRONOS 2.1.2, if they do. This will also allow time to convert programs to the 63/64 character set, and reduce user change over during the summer. At present, modifications to writeups and articles in the upcoming newsletters will be made to inform the users as to which character set the CYBER 74 will be using. A further article will be sent out discussing terminal I/O, character sets, and control bytes. If anyone has any questions regarding character sets I would be glad to help.

HOW TO AND WHY - The Complete Guide For The UCC Staff Member

by - T. W. Lanzatella and A. B. Mickel

Because a complete collection of Deadstart System Newsletters only partially represents UCC policy on all subjects it has become necessary to begin a new collection of documents called HOW TO AND WHY - The Complete Guide for the UCC Staff Member. Two copies of this manual will be maintained: one by Andy Mickel at Experimental Engineering and one by Tom Lanzatella at Lauderdale. Staff members should continue to try and channel all important internal policy memos through the Deadstart Systems Newsletter as this is the most efficient way to insure that the entire staff finds out about policy decisions. The table of contents for the new manual is printed below.

1. Deadstart System Newsletter - Nearly everything one needs to know about the operating system.

2. Minnesota Modification Method - An anthology of reports on how to modify the operating system.

3. CALLPRG - A compendium of memos describing CALLPRG - its purpose and function.

4. Documentation Standards - How to write it - at UCC.

5. Libraries and Compilers - An assortment of memos describing library and compiler maintenance.

6. Important Memos - A miscellany of motley memos describing diverse subjects from Badges to Permanent File Policy.

The CALLPRG Index as a Black Hole — by - T. W. Lanzatella, R. T. Franta and A. B. Mickel

Recent cosmological theory states that no information can ever be obtained about the internal composition of a Black Hole because its gravitational field is so strong that not even light can escape. Anything that falls into a Black Hole is doomed for eternity - banished from the universe. Astronomers should not despair, however. This strange quirk of nature has an unbelieveably close analog right here at UCC - the CALLPRG index.

A recent survey by three yeteran members of UCC indicated that fully 19% of all programs on the CALLPRG index exist only as a cryptic name and a collection of bits on disk. Their purpose and directions for use are nowhere. This is an appalling situation after having devoted considerable time and effort to stressing the importance and necessity of adequate documentation. Another fact inferred from the survey is that many programs are made publicly available which are of no use to the public. All this prompted a careful examination of currently available documentation on CALLPRG. We found plenty of documentation describing the purpose of CALLPRG(DSN 1,3 p5), how to use CALLPRG(WRITEUP,CALLPRG.) and how to put something into the CALLPRG index(DSN 1,3 p7), but no documentation of guide lines for what should go into the CALLPRG index. And that is the purpose of this little epistle. The following is a proposal for guide lines and method for placing a new program entry into the CALLPRG index. The guide lines do not pertain to FUTURE and PAST versions of a program.

The guide lines are simple:

1. The program must be of interest to the general user, ie, not only to UCC staff members.
2. The program must be well documented.
3. The program must have a sensible name.
4. The program must have a reasonable parameter format.

5. The program itself must be a:
    a. Program
    b. OPL
    c. Procedure File
    d. User Library
    e. File internal to CALLPRG used for CALLPRG maintenance

The proposed method for placing an entry into the CALLPRG index will involve a new form, a copy of which is attached to the back of this Deadstart Systems Newsletter. The purpose of the new form is to insure:

1. There is a consensus among UCC staff members that the program is useful, reasonably named and well documented.
2. That basic principles regarding program source and documentation backup on at least two different tapes are followed.
3. That all the people responsible for informing the public about the program at least find out about the program.

Blank forms can be obtained from Amy Koepke or Marisa Riviere. All proposals for new programs to be added to the CALLPRG index will be reproduced in a new section of the Deadstart Systems Newsletter entitled CALLPRG PROPOSALS. Any controversy surrounding a proposed program regarding name, parameter format, documentation or usefulness means the program must be discussed at a Systems Group meeting. Otherwise, approval of the program will lay in the hands of the CALLPRG review board consisting of: T. W. Lanzatella, R. T. Franta, A. B. Mickel, M. J. Frisch and D. R. Lienke. Since we now have precedents allowing non-UCC staff members to put program entries into the CALLPRG index, these guide lines and methods will apply to them too.

Since a large number of programs are presently included on the CALLPRG index which are of rather dubious utility, the CALLPRG review board will be initiating many CALLPRG Program Request Forms. This measure should not be construed as chastisement or castigation. We are simply trying to close a large documentation gap and catch up with the prolific programmers at UCC.

CALLPRG PROGRAM REQUEST

Person Responsible for Program_____

Program Name_____Written by UCC Staff Member ?_____

Location of Program Source_____Backup_____

Location of Program Documentation_____Backup_____

Program Support Catagory_____

Program Proposal:

Send to T. W. Lanzatella along with a copy of program documentation(when appropriate)
FOR INTERNAL USE

Review Board Approval:
T. W. Lanzatella
R. T. Franta
A. B. Mickel
M. J. Frisch
D. R. Lienke

Routed to T. W. Lanzatella for program announcement in DSN _____

Routed to A. B. Mickel for program inclusion in CCINDEX _____

Routed to A. Koepke for program announcement in UCC Newsletter _____
Users Manual _____
Pocket Guide _____

Routed to T. W. Lanzatella for SYSNOTE announcement _____

Routed to M. Riviere for WRITEUP(or other acceptable document) _____
SYSMODS file entry _____
CALLPRG index cards _____

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10 February 1976 Vol. 2, No. 3

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## NOTICE OF CHANGES TO THE OPERATING SYSTEM

Marisa Riviere fixed a problem with RFM processing of the permanent file security parameter, FS. Marisa also repaired a nasty bug in MF501 which caused an infinite loop issuing dayfile messages.

Kevin Matthews repaired a timing problem in DUMPPF which arose when attempting to dump from a private pack.

N. L. Reddy added all the appropriate modifications to MSI, SET and COMSRSX, and provided a version of 6DJ for installation of double density disk drives. The 844-41 disk drives, 6DJ, differs only slightly from 6DI and will be maintained on MPL.

Alan Johnston supplied a new version of COMPUPS, a CDC product which has been substituted by one of our own.

## PROPOSED CHANGES TO THE OPERATING SYSTEM

Level 11 Proposed Timesharing Changes - by Alan F. Johnston

1. In conjunction with the heavy use of brief mode, I propose that a VALIDUS entry called *TM* be added to automatically set the user into Brief mode or normal mode. The default would be normal, and optionally Brief. In brief mode most of the headers and messages are deleted or shortened to reduce time in printing and save paper. At log in time the mode would be set accordingly as specified in the VALIDUS entry. This mod requires only one bit added to the VALIDUS file and a minimal change to MODVAL.

2. Allow the ENQUIRE command or STATUS command to be shortened to E in all subsystems. Currently at least two character entries and up to seven in the BATCH subsystem are required to complete a command. The E command would do two things, one shorten the use of the ENQUIRE command to one character and replace the current C command. The C command has no meaning as far as ENQUIRE or STATUS goes but allowed the user to type in a one character command to find the status of his job (lazy user).

3. Change the format of the timesharing log in message. The new format would be:

```
 YY/MM/DD. HH/MM/SS.
TERMINAL:   NNN*
M E S S A G E
USER NUMBER:
```

The * would be a single bell character. The only changes from the current format are that the terminal number is output before the user number has to